



H2020

TOOLS IMPLEMENTATION EXAMPLE



Where

Basque Country, Spain

Issue types(s)

Conflicts with other sectors, economic, policy and management

Specific Issue(s):

Aquaculture is a new activity in this zone which is competing with existing traditional uses (i.e. artisanal fisheries).

Case study:

Basque Country, Spain

Objective(s):

Identification of opportunities for the development of offshore aquaculture industry (mussel production in longlines), while maintaining the same level of existing artisanal fishing activity: coexistence of both activities.

Tool(s):

Hydrodynamic model (ROMS), GIS multicriteria analysis (ArcGIS), AquaSpace tool and Bayesian Belief Networks.

How tool(s) has/have been implemented

Hydrodynamic modelling based on climatological data for wave, wind and current speeds.

GIS multicriteria analysis for site identification according to technical requirements for installing the cultivation infrastructures. Site selection was finally done by integrating other constraints (navigation routes, pipelines, etc.), legislation and assessment of conflicts of use.

AquaSpace tool was then implemented to assess trade-offs of aquaculture as a new economic activity and its impact in local communities and other existing activities.

A Bayesian Belief Network was developed and applied to assess opportunities for the coexistence of both activities, with options for reallocation of fishing activity maintaining the same fishing effort, improved use of marine space, and diversification of maritime activities in the area

Results:

This process allowed the assessment and analysis of opportunities for the coexistence of both activities, and thus, space optimisation and diversification of maritime activities in the area. The integrated assessment of trade-offs permitted the analysis of other sites surrounding the site selected in which aquaculture could be established or expanded.



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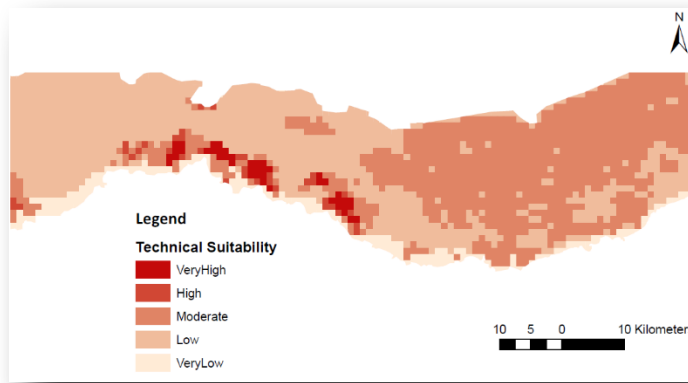


Fig. 1. Map of suitability index for the case study area.

Links:

AquaSpace D4.2 at aquaspace-h2020.eu on Library/Reports page

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Implementation factsheet from AquaSpace toolbox. aquaspace-h2020.eu/